

## Remarks

In response to the Office Action dated June 21, 2008, Applicant respectfully requests reconsideration based on the previous amendments and following remarks. Applicant respectfully submits that the claims as presented are in condition for allowance. Claims 1-3, 7-11, and 21 are pending. Claims 1, 7 and 10-11 have been amended for clarity. Claim 21 has been previously withdrawn in response to a previous restriction requirement. Claims 24-31 are new.

## Interview Summary

A telephone interview was conducted on September 04 between the undersigned and Examiners Graham and Shang. During the interview it was discussed that the mathematical theory of transitivity was not described in Knee. Further, it was discussed that modifying Knee to use the transitivity principle proffered as Official Notice would have required a substantive change in the operating principle of Knee. No agreement was reached.

## 112 Rejections

Claims 7 stands rejected under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement. Specifically, the phrase “the television program” does not have proper antecedent basis. Claim 7 has been amended to read “a television program”. As such the rejection against claim 7 may be withdrawn.

## 103 Rejections

Claims 1-3 and 7-11 have been rejected under 35 USC §103(a) as being unpatentable over Zigmond (US Pat. 6,698,020) in view of Knee (US Pat. App. 20020095676) in view of Ficco (U.S. Pat. App. 2005/0166224) and further in view of the inherency of the mathematical theory of transitivity within Knee. Applicant respectfully traverses the rejections.

Amended independent claim 1 recites, in pertinent part:

“[a] method for inserting targeted advertisements into a media delivery stream during broadcast media programming, comprising... receiving at a media delivery device a plurality of advertisements pre-identified by a transmitting entity to appeal to a preference of one or more viewers; receiving and storing in a database data representing a set of characteristics associated with each of the plurality of advertisements received by the media delivery device, each of the set of characteristics being unassociated with the one or more viewers when the search produces

more than one stored advertisement satisfying the at least one classification requirement, selecting the stored advertisement to be inserted by comparing directly together each of the at least two element weightings in the record for each of the stored advertisements that were produced by the search...”

The Office Action rejects independent claim 1 by asserting that Zigmond describes most of the claim elements but concedes that Zigmond fails to describe the particular usage of ‘weighting’ in selecting between multiple advertisements that match a given category. The Office Action proceeds by asserting that Knee cures the conceded discrepancy in Zigmond via the inherent mathematical principal of transitivity, but further concedes that the combination of Zigmond and Knee is unclear about real time individualization of ads in comparing sets of values together. The Office Action concludes by asserting that Ficco cures the conceded deficiencies in the combination of Zigmond, Knee and the mathematical principal of transitivity.

Applicant respectfully traverses these rejections and asserts that Knee fails to describe the subject matter asserted to Knee by the Office Action because Knee fails to describe the particular usage of ‘weighting’ in selecting between multiple advertisements that match a given criteria and because the principal of transitivity is not inherent in Knee.

In its rejection, the Office Action points out that Zigmond describes two or more appropriate advertisements may be selected for an available time slot after the initial search which is based on viewer preferences. (Abstract; Col. 4, l. 25-30). If so, the multiple advertisements are rendered for viewing simultaneously using a split screen or a computer may choose one to render. However, Zigmond is silent about how a computer may make that second choice. (Col. 16, l. 65-Col. 17, l. 9).

The Office Action continues by asserting that Knee describes “comparing directly together each of the at least two element weightings in the record for each of the stored advertisements that were produced by the search” as recited in the claim. Applicant respectfully disagrees.

Knee is concerned with selecting a commercial from a database for presentation to a viewer. Knee describes that a set of values is pre-assigned to each commercial by the advertiser (FIG. 2; para. 0020, 0028). These pre-assigned sets of values describe the type of viewer to which the advertisement would most likely appeal. The comparison routine in Knee then chooses between the stored commercials by comparing each set of pre-assigned values to a set of

demographic values describing a specific viewer. (para. 0029-0036). Knee describes a single step process whereby all of the advertisements are compared to the viewer profile. (para.0049). The advertisement best satisfying the comparison criteria is then selected for rendition.

Knee describes two selection methods. The first method is a simple threshold approach where all advertisements meeting the threshold are rendered to the viewer. (para. 0046). There is no description of "...comparing directly together each of the at least two element weightings in the record for each of the stored advertisements that were produced by the search..." associated to this method.

Knee also describes a well known "best fit" analysis (e.g. root mean squared) where the absolute difference for each statistic in an advertisement set is found by subtracting each of the viewer related values pre-assigned to the advertisement from corresponding values of the **viewer** demographics/statistics. Each of the absolute differences is then summed. (para. 0047).

For example, Knee describes that the viewer specific set of demographics (para. 0031) is compared to Advertisement #1 (para. 0032) to determine a fit between the viewer demographic statistics and the values pre-assigned to Advertisement #1. The process is repeated for Advertisement #2. (para. 0033). The advertisement with a set of values that best fits those of the viewer is then chosen (e.g. the lowest cumulative difference or square of the differences). Because Knee expressly describes comparing the advertisement statistics to a viewer specific standard, Knee is not describing "...comparing directly together each of the at least two element weightings in the record for each of the stored advertisements that were produced by the search...".

The Office Action attempts to cure the fact that Knee does not describe directly comparing advertisements to each other by asserting that Knee inherently uses the principle of transitivity "to [in effect] directly compare the values of ad 1 and the values of ad 2 together. So, if ad 1=A and ad 2=C and the benchmark =B, then if A>B and B>C then A>C". However, Knee's "best fit" approach does not inherently use the theory of transitivity such that it may not even be inferred.

In asserting inherency, the Examiner must provide a rationale tending to show inherency. The fact that a certain characteristic **may occur** or be present in the prior art **is not sufficient** to establish the inherency of that characteristic. To establish inherency, the reference **must make clear**, that the principle of transitivity is necessarily present in the best fit method of Knee, and

that it would be so recognized by persons of ordinary skill. However, inherency may NOT be established by possibility or probability. The mere fact that transitivity may result for a given set of circumstances is not enough. In relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of Knee. (MPEP 2112).

It should be noted here that Knee is choosing a single advertisement in a **single search/comparison process**. Because Knee selects the advertisement in a single search step, Knee **necessarily must compare each advertisement to a standard (i.e. the viewer profile)** in order to have any relevancy to the viewer.

In Knee's threshold approach, any advertisement that meets a predetermined threshold is displayed. There is no discrimination at all between advertisements with this approach. If an advertisement meets the threshold, it is shown. As such, this approach fails to describe "...comparing directly together each of the at least two element weightings in the record for each of the stored advertisements that were produced by the search..." and has nothing to do with the theory of transitivity. It then follows that the threshold method is not concerned with finding the one best ad at the moment but winnow the pool down to a small subset which are shown.

In Knee's "best fit" approach, it is the sum of the absolute **magnitudes of the differences** (i.e.  $|A-B|$ ) between the weighted advertisement parameters and the user specific statistics that makes the determination of which of several potential advertisements are shown. Applicant respectfully asserts that the transitive property is not a mechanism described in Knee and does not necessarily flow from the best fit method of Knee.

If, for example, one assumes that A is only slightly greater than  $B_{standard}$  and  $B_{standard}$  is very great compared to C, then the transitive property consistently applied would say that A is greater than C. Conversely, if one assumes that A is much greater than  $B_{standard}$  and  $B_{standard}$  is small compared to C, then the transitive property consistently applied would still say that A is still greater than C which is the theory of transitivity in the Examiner's example.

In the case of a best fit methodology where A is slightly greater than  $B_{standard}$  and  $B_{standard}$  is very great compared to C, one would have  $|A-B_{standard}| < |B_{standard}-C|$  so A would be the best fit.

In a second case, the sum of the differences between A and  $B_{standard}$  would be great and the sum of the differences between  $B_{standard}$  and C would be small, one would have  $|A-B_{standard}|$

$> |B_{\text{standard}} - C|$  so C would be the best fit. However, in both cases  $A > B_{\text{standard}} > C$ . Because the best fit approach provides different results than does a system using transitivity, Knee is not inherently using the theory of transitivity.

The situation is even clearer if both A and C are greater than  $B_{\text{standard}}$ . In this case the Knee best fit method may indicate that  $|C - B_{\text{standard}}| > |A - B_{\text{standard}}|$  may be the best fit, however, transitivity does not apply because, although  $A > B$  and  $C > B$ , it can not be deduced that  $A > C$  or that  $C > A$ . Therefore, Knee does not inherently utilize the transitive property.

For the above reasons, Applicant respectfully asserts that the assertion of inherency is incorrect and the use of transitivity does not necessarily flow from the teachings of Knee. Therefore, Knee does not describe "...**directly comparing** each of the at least two classifications weightings in the record for each of the stored advertisements that were produced by the search...". As such, claim 28 is allowable over the combination of Zigmond and Knee for at least these reasons.

Applicant further submits that Ficco fails to cure the above discrepancies in Zigmond and Knee. Ficco concerns itself with choosing an advertisement to insert into a broadcast stream by generating a "selection factor". (Abstract). Each of the advertisements has assigned an index value to be compared to the selection factor. (para. 0036). An ad selection generator receives information about the user from a database (para. 0039) and generates an index number or concatenation of index numbers for the selection factor. (para.0043). A multiplexer then receives the ad selection factor and selects an ad from memory by some undescribed mechanism. Because Ficco fails to describe the selection process, Ficco fails to cure the above discrepancies in the combination of Zigmond and Knee.

Because the combination of Zigmond, Knee and Ficco fails to describe each and every claim element, the combination cannot support a prima-facie case of obviousness against amended independent claim 1.

Further, and without conceding that the rejection is correct, claim 1 has been amended to clarify that the media delivery device receives a plurality of advertisements pre-identified by a transmitting entity to appeal to a preference of one or more viewers and that a database receives and stores data representing a set of characteristics associated with each of the plurality of advertisements received by the media delivery device, **the set of characteristics being unassociated with the one or more viewers**. Each of the references describes comparing an

advertisement to some statistic(s) associated with **the viewer** at a media storage device. (e.g. Zigmond Col. 4, l. 24-32; Ficco Abstract, ¶ 11; Knee ¶ 28). Because in the combination of Zigmond, Knee and Ficco, each relies on comparing advertisement information to viewer demographic information and does not describe that **the set of characteristics is unassociated with the one or more viewers**, amended independent claim 1 is allowable over the current combination of references for at least this additional reason.

Because the Office Action's assertion of inherency of the transitivity principal in Knee is incorrect and the combination of Zigmond, Knee and Ficco fails to describe each and every claim element, a *prima facie* case of obviousness cannot be established. As such, amended independent claim 1 is allowable over the combination of Zigmond, Knee and Ficco for at least these reasons. Claims 2-3 and 7-11 depend from an allowable amended independent claim 1 and are allowable for at least the same reason.

### Conclusion

In view of the foregoing remarks, Applicant respectfully asserts that the present application is in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is invited to call the Applicant's attorney at the number listed below.

No fees are believed due. However, please charge any additional fees or credit any overpayment to Deposit Account No. 50-3025.

Respectfully submitted,

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